

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P840269

Luminaire Tested: **LD4C90D010 EU4909027 4LBCSSQMW**

Issue Date: 5/25/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P840269  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209253)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/25/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C90D010 EU4909027 4LBCSSQMW  
Description: 4 INCH 9000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBCSSQ TRIM WITH MW FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

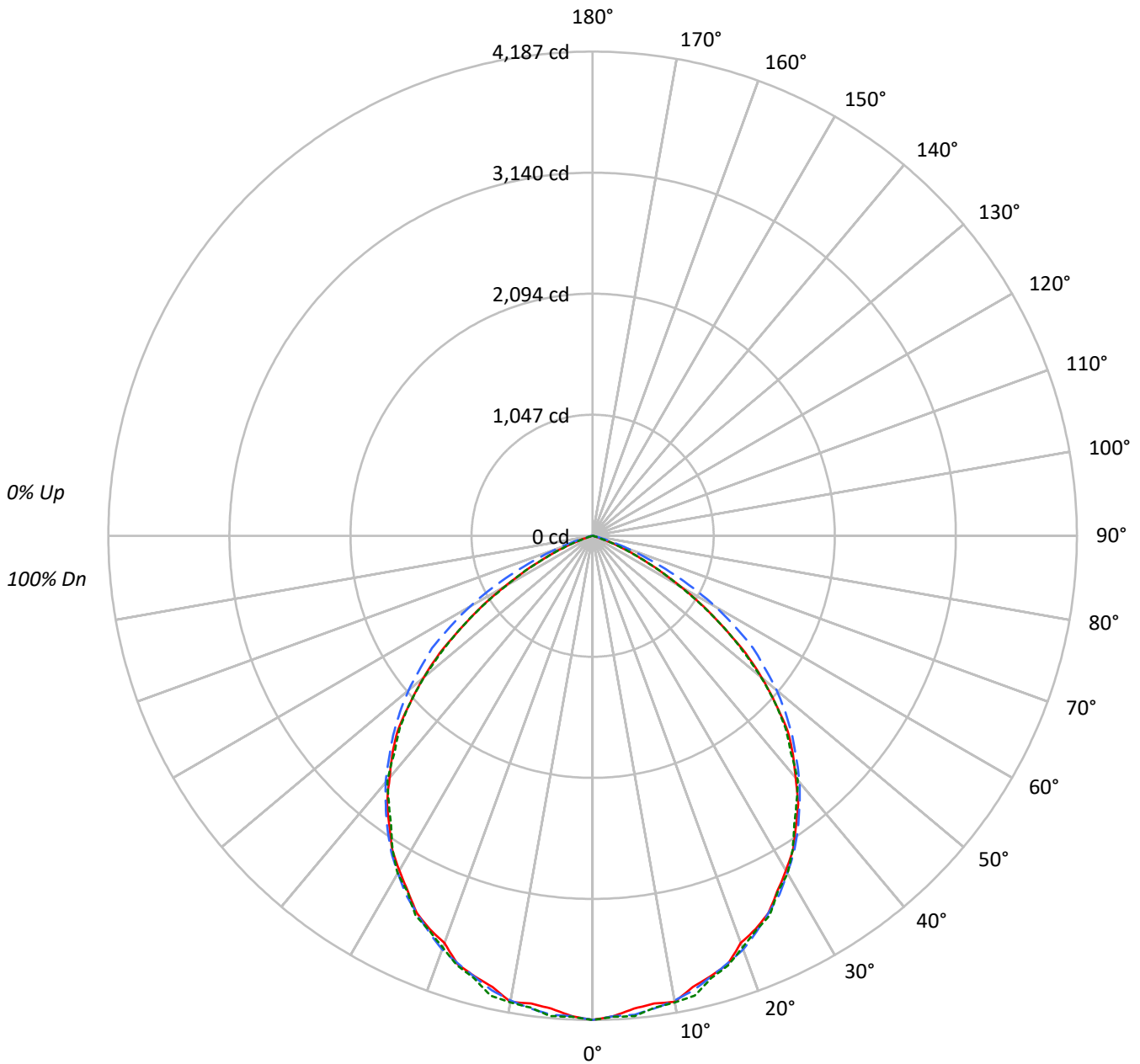
Lumens per Lamp: N/A  
Luminaire Lumens: 8944.0 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 97.1  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89								
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77								
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67								
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	403999	403999	403999
5°	397474	402646	403799
10°	400904	399748	401482
15°	393887	394466	395655
20°	384726	390826	389008
25°	383067	383067	385590
30°	372385	375037	375705
35°	360771	364281	357967
40°	343838	350564	347567
45°	325420	332734	322172
50°	286590	311568	284804
55°	232098	285122	233124
60°	169840	236436	166424
65°	103220	168357	100503
70°	40258	90643	38621
75°	4436	24419	4436
80°	3390	3390	3390
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	395.2	4.4
10°-20°	1118.3	12.5
20°-30°	1659.4	18.6
30°-40°	1922.7	21.5
40°-50°	1843.5	20.6
50°-60°	1355.4	15.2
60°-70°	585.4	6.5
70°-80°	63.2	0.7
80°-90°	0.8	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3172.9	35.5
0°-40°	5095.7	57.0
0°-60°	8294.6	92.7
0°-90°	8944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8944.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4187	4187	4187	4187	4187	
5°	4104	4145	4157	4163	4169	392
15°	3943	3967	3949	3955	3961	1111
25°	3598	3592	3598	3604	3622	1647
35°	3063	3081	3093	3086	3039	1915
45°	2385	2391	2438	2403	2361	1813
55°	1380	1522	1695	1517	1386	1242
65°	452	565	737	559	440	465
75°	12	18	66	12	12	37
85°	0	0	0	0	0	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0
2.5°	4157.1	4204.7	4210.7	4180.9	4169.0	4151.3	4192.8	4163.2	4175.1	4163.2	4157.1
5°	4103.7	4157.1	4163.2	4163.2	4151.3	4145.2	4163.2	4157.1	4151.3	4139.4	4157.1
7.5°	4080.0	4109.6	4139.4	4103.7	4121.5	4115.6	4157.1	4139.4	4133.3	4133.3	4121.5
10°	4091.8	4085.8	4109.6	4073.9	4085.8	4073.9	4109.6	4109.6	4097.7	4085.8	4080.0
12.5°	3996.5	4044.0	4044.0	4038.2	4026.3	4008.4	4044.0	4068.1	4032.2	4032.2	4026.3
15°	3943.1	3955.0	3960.8	3960.8	3955.0	3966.9	3984.6	3960.8	3966.9	3937.0	3948.9
17.5°	3883.6	3859.9	3877.6	3865.7	3871.8	3883.6	3907.4	3907.4	3871.8	3865.7	3877.6
20°	3746.8	3818.1	3824.2	3788.5	3794.4	3794.4	3836.1	3800.4	3824.2	3794.4	3806.2
22.5°	3681.3	3728.8	3734.9	3687.3	3717.0	3681.3	3723.0	3669.4	3728.8	3687.3	3705.1
25°	3598.1	3592.2	3609.9	3586.2	3592.2	3592.2	3621.8	3598.1	3616.0	3592.2	3598.1
27.5°	3461.4	3509.0	3502.9	3479.1	3491.0	3485.2	3544.7	3479.1	3514.8	3485.2	3497.1
30°	3342.3	3384.0	3372.1	3348.4	3348.4	3330.4	3395.9	3378.0	3372.1	3372.1	3366.1
32.5°	3223.4	3229.5	3217.6	3223.4	3229.5	3205.7	3259.1	3235.3	3229.5	3235.3	3241.3
35°	3062.8	3062.8	3074.7	3056.9	3080.7	3080.7	3128.3	3098.4	3092.6	3074.7	3092.6
37.5°	2920.1	2902.4	2908.2	2908.2	2920.1	2932.0	2955.8	2943.9	2943.9	2926.1	2938.0
40°	2729.8	2717.9	2735.7	2735.7	2753.6	2753.6	2777.4	2765.5	2783.2	2783.2	2783.2
42.5°	2563.4	2563.4	2551.5	2569.2	2575.3	2569.2	2610.9	2604.9	2610.9	2599.0	2604.9
45°	2384.8	2384.8	2372.9	2367.1	2396.7	2390.9	2438.4	2420.5	2444.2	2432.4	2438.4
47.5°	2140.9	2170.8	2152.8	2170.8	2206.4	2212.5	2242.1	2230.2	2254.0	2236.3	2260.1
50°	1909.2	1909.2	1926.9	1950.7	1986.4	1992.4	2028.1	2051.9	2063.8	2069.6	2075.6
52.5°	1665.3	1659.3	1677.2	1706.8	1736.7	1760.4	1796.1	1831.8	1855.6	1891.2	1873.3
55°	1379.7	1391.6	1409.6	1445.2	1492.8	1522.4	1552.2	1599.8	1641.5	1659.3	1694.9
57.5°	1135.9	1124.0	1135.9	1183.4	1237.0	1260.8	1302.6	1350.1	1409.6	1445.2	1457.1
60°	880.1	886.2	898.1	939.8	981.3	1017.0	1034.9	1112.1	1165.7	1201.4	1225.2
62.5°	648.4	660.3	672.1	707.8	749.3	779.2	808.8	874.3	921.8	957.5	981.3
65°	452.1	457.9	475.8	493.6	535.3	564.9	588.7	642.3	689.9	719.7	737.4
67.5°	279.5	285.4	297.3	321.3	350.9	374.7	398.4	434.1	475.8	505.4	511.5
70°	142.7	148.7	154.6	172.5	196.3	208.2	225.9	255.8	285.4	309.1	321.3
72.5°	47.6	47.6	53.6	65.5	77.4	89.3	95.1	125.0	148.7	160.6	166.5
75°	11.9	11.9	11.9	11.9	11.9	18.0	18.0	35.7	47.6	59.5	65.5
77.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	11.9	11.9
80°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0	4187.0
2.5°	4187.0	4175.1	4169.0	4175.1	4175.1	4169.0	4187.0	4210.7	4240.4	4163.2
5°	4180.9	4169.0	4180.9	4145.2	4163.2	4151.3	4175.1	4169.0	4192.8	4169.0
7.5°	4163.2	4139.4	4145.2	4127.5	4151.3	4121.5	4139.4	4175.1	4151.3	4115.6
10°	4103.7	4091.8	4133.3	4073.9	4062.0	4085.8	4133.3	4097.7	4085.8	4097.7
12.5°	4044.0	4044.0	4062.0	4014.4	4020.3	4032.2	4055.9	4032.2	4044.0	4073.9
15°	3978.8	3966.9	3996.5	3960.8	3955.0	3943.1	3966.9	3966.9	3978.8	3960.8
17.5°	3901.4	3883.6	3883.6	3871.8	3865.7	3895.5	3907.4	3913.3	3919.3	3895.5
20°	3806.2	3800.4	3818.1	3800.4	3806.2	3812.3	3812.3	3800.4	3853.8	3788.5
22.5°	3705.1	3723.0	3699.2	3687.3	3699.2	3711.1	3711.1	3717.0	3705.1	3693.2
25°	3604.1	3616.0	3621.8	3586.2	3604.1	3586.2	3627.9	3633.7	3609.9	3621.8
27.5°	3514.8	3497.1	3491.0	3467.3	3479.1	3473.3	3479.1	3479.1	3514.8	3467.3
30°	3378.0	3360.2	3366.1	3348.4	3354.2	3348.4	3354.2	3354.2	3378.0	3372.1
32.5°	3247.2	3229.5	3235.3	3217.6	3217.6	3223.4	3211.5	3211.5	3229.5	3217.6
35°	3122.2	3080.7	3086.5	3080.7	3086.5	3062.8	3062.8	3056.9	3068.8	3039.0
37.5°	2943.9	2926.1	2920.1	2914.3	2920.1	2908.2	2920.1	2902.4	2920.1	2896.3
40°	2783.2	2771.3	2777.4	2741.7	2741.7	2747.6	2735.7	2729.8	2735.7	2759.4
42.5°	2622.8	2599.0	2587.2	2575.3	2581.1	2563.4	2557.3	2545.4	2557.3	2533.5
45°	2432.4	2432.4	2426.5	2396.7	2402.7	2402.7	2379.0	2355.2	2361.0	2361.0
47.5°	2260.1	2248.2	2242.1	2212.5	2206.4	2200.6	2176.6	2158.9	2158.9	2140.9
50°	2069.6	2057.7	2040.0	2010.1	1998.2	1962.6	1944.9	1921.1	1897.3	1897.3
52.5°	1891.2	1849.5	1825.7	1778.2	1760.4	1742.5	1694.9	1677.2	1659.3	1641.5
55°	1677.2	1641.5	1594.0	1540.4	1516.6	1486.7	1439.2	1403.5	1379.7	1385.8
57.5°	1469.0	1409.6	1362.0	1290.7	1260.8	1242.9	1195.3	1147.7	1124.0	1124.0
60°	1213.3	1165.7	1106.2	1040.7	1017.0	987.3	927.7	898.1	880.1	862.4
62.5°	969.4	933.7	880.1	796.9	779.2	749.3	707.8	672.1	654.2	654.2
65°	725.5	689.9	642.3	582.9	559.1	535.3	499.6	463.9	446.0	440.2
67.5°	511.5	469.8	428.3	380.7	362.8	350.9	315.2	291.4	279.5	273.5
70°	309.1	285.4	255.8	220.1	202.1	190.2	166.5	148.7	142.7	136.9
72.5°	160.6	142.7	118.9	95.1	83.2	71.3	59.5	47.6	41.7	41.7
75°	59.5	47.6	29.8	18.0	11.9	11.9	11.9	11.9	11.9	11.9
77.5°	11.9	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
80°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG







— 0°-180°    - - 45°-225°    - - - - 90°-270°









(END OF REPORT)